

Decomposition A/M

i) $x^2 + 7x + 12$

ii) $2x^2 - 10x + 8$

iii) $3s^2 + 8st + 4t^2$

Sep 26-8:10 AM

Decomposition A/M

i) $x^2 + 7x + 12$
 $x^2 + 3x + 4x + 12$
 $x(x+3) + 4(x+3)$
 $(x+3)(x+4)$

ii) $3s^2 + 8st + 4t^2$
 $3s^2 + 6st + 2st + 4t^2$
 $3s(s+2t) + 2t(s+2t)$
 $(s+2t)(3s+2t)$

$2x^2 - 10x + 8$
 $2(x^2 - 5x + 4)$
 $2(x^2 - 4x - 1x + 4)$
 $2(x(x-4) - 1(x-4))$
 $2(x-4)(x-1)$
 $f(x) = a(x-s)(x-t)$
 $(1, 3) (4, 0)$

Sep 26-8:10 AM

STEPS Decomposition -Factoring

i) Common Factor

Special Cases

ii) Difference of Squares

iii) Perfect Squares

iv) Decomposition A/M
b/a < c

v) Determine Non Factorable - Quad Formula

$2x^2 - 7x - 4$
 $2x^2 + 1x - 8x - 4$
 $x(2x+1) - 4(2x+1)$
 $(2x+1)(x-4)$

$3x^2 + 18x + 15$
 $3(x^2 + 6x + 5)$
 $3(x^2 + 1x + 5x + 5)$
 $3[x(x+1) + 5(x+1)]$
 $3(x+1)(x+5)$

Sep 27-9:47 AM

Factoring Special Cases

Difference of Squares

Check

c term- negative
no middle term
square roots a > c

$(x^2 - 49)$
 $a)x^2 + bxc + c$
 $(\sqrt{x^2} - \sqrt{49})$
 $(x+7)(x-7)$

(perfect)

Feb 25-10:58 AM

$(x^2 - 81)$ $(x^2 - 121)$
 $(x-9)(x+9)$ $(x+11)(x-11)$

$(x^2 + 225)$ $(9x^2 - 16)$
nonfactorable $(3x-4)(3x+4)$

$(-x^2 + 225)$
 $-1(x^2 - 225)$
 $-(x-15)(x+15)$

Feb 25-11:01 AM

Perfect Squares

$a)x^2 + bxc + c$

$x^2 + 14x + 49$
 $(x+7)(x+7)$
 $(x+7)^2$

$\sqrt{\quad} \sqrt{\quad} x^2$
 $= \text{middle term}$
 $= \text{Perfect Square}$

Feb 25-11:06 AM

$$x^2 - 16x + 64 \quad x \quad (3) \quad x^2$$

$$(x - 8)^2$$

$$x^2 - 20x + 100 \quad x \quad 10 \quad (2)$$

$$(x - 10)^2$$

Feb 25-11:09 AM

$$9m^2 + 42m + 49 \quad 3m \quad 7 \quad x^2$$

$$(3m + 7)^2 \quad (3m)(7)(2)$$

Homework

q 4-10, 13* p 110

q 2-4 p 115

q 3,4, 13, 18 p. 120

Feb 25-11:12 AM

$$x^2 + 52x + 100 \quad \sqrt{x^2} \quad \sqrt{100}$$

$$x^2 + 50x + 2x + 100 \quad x \quad 10 \quad (2)$$

$$x(x+50) + 2(x+50) = 20x$$

$$(x+50)(x+2)$$

+52	A	M	
			+100
			100
			2 50

Sep 24-10:30 AM

$$h(t) = 45 - 5t^2$$

$$0 \leq t \leq 3 \quad a)$$

$$0 = 45 - 5t^2$$

$$-45 = -5t^2$$

$$\frac{-45}{-5} = \frac{-5t^2}{-5}$$

$$9 = t^2$$

$$\sqrt{9} = t$$

$$3 = t$$

Feb 25-11:14 AM